In The Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method for fabricating a semiconductor device, the method comprising:

forming a first conductive layer for a first electrode on a semiconductor substrate;

depositing ~~forming a~~ an amorphous dielectric layer on the first conductive layer;

forming a second conductive layer for a second electrode on the amorphous dielectric layer, without performing a thermal process to cure the dielectric layer between depositing the dielectric layer and forming the second conductive layer;

~~after forming the dielectric layer and after forming the second conductive layer, removing~~ etching portions of the second conductive layer and portions of the dielectric layer to expose sidewalls of the dielectric layer ~~thereby exposing portions of the first conductive layer previously covered by the dielectric layer~~; and

collectively performing a thermal process on the second conductive layer and the dielectric layer thereby curing the dielectric layer ~~at a temperature of at least about 400°C~~.

2. (withdrawn) The method of claim 1, wherein the thermal process comprises:

heating the second conductive layer and the dielectric layer to a first temperature in the range of about 450°C to 600°C in an inert gas atmosphere; and

then, heating the second conductive layer and the dielectric layer to a second temperature in the range of about 350°C to 450°C in a gas atmosphere including oxygen.

3. (original) The method of claim 1, wherein forming the dielectric layer is preceded by:

depositing a seed layer on the first conductive layer; and

crystallizing the seed layer.

4. (original) The method of claim 1, wherein the performing the thermal process comprises heating the dielectric layer and the second conductive layer at a temperature in the range of about 450°C to 600°C in an inert gas atmosphere.

5. (withdrawn) The method of claim 1, wherein performing the thermal process comprises:

heating the dielectric layer and the second conductive layer at a first temperature in the range of about 350°C to 450°C in a gas atmosphere including oxygen; and

then, heating the dielectric layer and the second conductive layer at a second temperature in the range of about 450°C to 600°C in an inert gas atmosphere.

6. (withdrawn) The method of claim 1, wherein performing the thermal process comprises:

heating the dielectric layer and the second conductive layer at a first temperature in the range of about 650°C to 700°C in an inert gas atmosphere; and

then, heating the dielectric layer and the second conductive layer at a second temperature in the range of about 350°C to 450°C in a gas atmosphere including oxygen.

7. (withdrawn) The method of claim 1, wherein performing the thermal process comprises heating the dielectric layer and the second conductive layer at a temperature in the range of about 650°C to 700°C in an inert gas atmosphere.

8. (withdrawn) The method of claim 1, wherein performing the thermal process comprises:

heating the dielectric layer and the second conductive layer at a first temperature in the range of about 350°C to 450°C in a gas atmosphere including oxygen; and

then, heating the dielectric layer and the second conductive layer at a second temperature in the range of about 650°C to 700°C in an inert gas atmosphere.

9. (original) The method of claim 1, wherein the first conductive layer comprises at least one material selected from the group consisting of platinum (Pt), ruthenium (Ru), iridium (Ir), rhodium (Rh), and/or osmium (Os).

10. (original) The method of claim 9, wherein the second conductive layer comprises a same material as the first conductive layer.

11. (original) The method of claim 1, wherein forming the dielectric layer comprises forming a tantalum oxide layer.

12. (original) The method of claim 1, wherein forming the dielectric layer comprises depositing tantalum oxide at a temperature in the range of about 380°C to 500°C using chemical vapor deposition (CVD).

13. (currently amended) The method of claim 1, wherein ~~removing~~ etching portions of the second conductive layer and the dielectric layer comprises dry etching the second conductive layer and the dielectric layer.

14. (original) The method of claim 1 wherein performing the thermal process comprises performing the thermal process on the second conductive layer and the dielectric layer after removing portions of the second conductive layer and the dielectric layer.

15. (currently amended) A method for fabricating a semiconductor device, the method comprising:

forming a first conductive layer for a first electrode on a semiconductor substrate;

depositing ~~forming a~~ an amorphous tantalum oxide layer on the first conductive layer;

forming a second conductive layer for a second electrode on the amorphous tantalum oxide layer without performing a thermal process to cure the tantalum oxide layer between depositing the tantalum oxide layer and forming the second conductive layer;

~~after forming the tantalum oxide layer and after forming the second conductive layer,~~ ~~removing~~ etching portions of the second conductive layer and portions of the tantalum oxide

layer to expose sidewalls of the tantalum oxide layer ~~thereby exposing portions of the first conductive layer previously covered by the tantalum oxide layer~~; and

collectively performing a thermal process to reduce an interface stress between the second conductive layer and the deposited tantalum oxide layer and to cure the deposited tantalum oxide layer~~, while maintaining the tantalum oxide layer in a substantially amorphous state during and after the thermal process~~.

16. (withdrawn) The method of claim 15, wherein performing the thermal process comprises:

heating the tantalum oxide layer and the second conductive layer at a first temperature in the range of about 450°C to 600°C in an inert gas atmosphere; and

then, heating the tantalum oxide layer and the second conductive layer at a second temperature in the range of about 350°C to 450°C in a gas atmosphere including oxygen.

17. (withdrawn) The method of claim 16, wherein heating at the first temperature and heating at the second temperature are performed *in situ*.

18. (original) The method of claim 15, wherein performing the thermal process comprises heating the tantalum oxide layer and the second conductive layer at a temperature in the range of about 450°C to 600°C in an inert gas atmosphere.

19. (withdrawn) The method of claim 15, wherein the thermal process comprises:

heating the tantalum oxide layer and the second conductive layer at a first temperature in the range of about 350°C to 450°C in a gas atmosphere including oxygen; and

then, heating the tantalum oxide layer and the second conductive layer at a second temperature in the range of about 450°C to 600°C in an inert gas atmosphere.

20. (withdrawn) The method of claim 15, wherein heating at the first temperature and heating at the second temperature are performed *in situ*.

21. (original) The method of claim 15, wherein the first conductive layer comprises at least one material selected from the group consisting of Pt, Ru, Ir, Rh, and/or Os.

22. (original) The method of claim 21, wherein the second conductive layer comprises a same material as the first conductive layer.

23. (original) The method of claim 15, wherein forming the tantalum oxide layer comprises depositing tantalum oxide at a temperature in the range of about 380°C to 500°C using chemical vapor deposition.

Claims 24-41 (canceled).

42. (currently amended) The method of Claim 1 wherein performing ~~[[a]]~~ the thermal process comprises performing a thermal process after removing portions of the second conductive layer and after removing portions of the dielectric layer.

43. (currently amended) The method of Claim 15 wherein performing ~~[[a]]~~ the thermal process comprises performing a thermal process after removing portions of the second conductive layer and after removing portions of the tantalum oxide layer.

Claim 44 (canceled).

45. (new) A method for fabricating a semiconductor device, the method comprising:

forming a first conductive layer for a first electrode on a semiconductor substrate;

forming a dielectric layer on the first conductive layer;

forming a second conductive layer for a second electrode on the dielectric layer;

after forming the dielectric layer and after forming the second conductive layer, removing portions of the second conductive layer and portions of the dielectric layer thereby exposing portions of the first conductive layer previously covered by the dielectric layer; and

after removing portions of the second conductive layer and after removing portions of the dielectric layer, performing a thermal process on the second conductive layer and the

dielectric layer at a temperature of at least about 400°C while the second conductive layer remains exposed wherein the performing the thermal process comprises heating the dielectric layer and the second conductive layer at a temperature in the range of about 450°C to 600°C in an inert gas atmosphere.

46. (new) A method for fabricating a semiconductor device, the method comprising:

forming a first conductive layer for a first electrode on a semiconductor substrate;

forming a tantalum oxide layer on the first conductive layer;

forming a second conductive layer for a second electrode on the tantalum oxide layer;

after forming the tantalum oxide layer and after forming the second conductive layer, removing portions of the second conductive layer and portions of the tantalum oxide layer thereby exposing portions of the first conductive layer previously covered by the tantalum oxide layer; and

after removing portions of the second conductive layer and after removing portions of the tantalum oxide layer, performing a thermal process to reduce an interface stress between the second conductive layer and the tantalum oxide layer and to cure the tantalum oxide layer, while maintaining the tantalum oxide layer in a substantially amorphous state during and after the thermal process wherein performing the thermal process comprises heating the tantalum oxide layer and the second conductive layer at a temperature in the range of about 450°C to 600°C in an inert gas atmosphere while the second conductive layer remains exposed.